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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,171	11/30/2001	Hyoyoung Lee	2013P002	4281

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EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 08/06/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

A 95

Office Action Summary

Application No.

10/007,171

Applicant(s)

LEE ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Applicant's election without traverse of Group I, claims 1-3 and 6-9, in Paper No. 4 (received July 28, 2003) is acknowledged.

Claims 4 and 5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. (Method claims 4 and 5 will be subject to rejoinder upon allowance of a product claim provided the conditions for rejoinder are met. See MPEP 821.04.)

2. Claims 2 and 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, with claims 6-9 dependent directly or indirectly therefrom: Claim 2 refers to X_2Y_2 but there is no X_2Y_2 in the formula for the compound. In claim 2, " X_2Y_2 " should apparently read -- X_2R_2 --.

Claim 8, with claim 9 dependent therefrom: There is no antecedent basis for "the EL material" as dependent from claims 1 through 3. In claim 8, "the EL material" should be changed to --the bisphenylene-spirobifluorene compound--.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Lupo et al. (US 5,840,217).

Lupo et al. disclose bisphenylene-spirobifluorene compounds defined by the formula set forth in present claim 1. Lupo et al. disclose these compounds for use as electroluminescent (EL) materials in EL devices.

See the whole patent. In particular, see Spiro-70, Spiro-81 and Spiro-92 as defined in Table 1 with reference to column 11 for formula (IV) and column 12 for the formulae for G1, G2, G3 and G12. Also see the claims.

Spiro-70 is a compound of the formula set forth in present claim 1 wherein each of R_1 and R_2 is a branched alkyl group having four carbon atoms, each of X_1 and X_2 contains the elements C, O and N, and each of m and n is 1.

Spiro-81 is a compound of the formula set forth in present claim 1 wherein each of R_1 and R_2 is a branched alkyl group having four carbon atoms, each of X_1 and X_2 contains the elements C, O and N, and each of m and n is 2.

Spiro-92 is a compound of the formula set forth in present claim 1 wherein each of R_1 and R_2 is a branched alkyl group having four carbon atoms, each of X_1 and X_2 contains the elements C, O and N, and each of m and n is 3.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupo et al. (US 5,840,217) as applied to claims 1 and 6-9 above, and for the further reasons set forth below.

The prior art compounds Spiro-70, Spiro-81 and Spiro-92 are compounds of the formula set forth in present claim 1 wherein X_1R_1 and X_2R_2 are at 2',7'-positions. These prior art compounds are position isomers of the compound as defined in present claims 2 and 3.

Although Lupo et al. teach a preference for compounds having the substitution pattern of formula (IV) as shown in column 11, the prior art compounds are not limited to this substitution pattern. As taught for compounds of formula (II) as shown in the abstract and in column 2, and as claimed in claim 1 of the patent, any of the ring carbons may be substituted.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to make compounds similar to the specific compounds disclosed by Lupo et al. in order to provide other spiro compounds suitable for use as EL materials in EL devices as taught by Lupo et al. Compounds which are position isomers are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). One of ordinary skill in the art at the time of the invention would have reasonably expected that position isomers of Spiro-70, -81 and -92, having the G12 substituents at different positions on the ring carbons,

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would provide compounds having properties similar to the properties of Spiro-70, -81 and -92 and would be usable for the same purposes as the specific compounds disclosed in the prior art.

7. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (703) 308-4413. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax numbers for Art Unit 1774 are (703) 872-9311 for official after final faxes and (703) 872-9310 or (703) 305-5408 for all other official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (703) 872-9041.)

MRY
August 01, 2003

Marie R. Yamnitzky

MARIE YAMNITZKY
PRIMARY EXAMINER

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